

WHAT IS CLAIMED IS:

1. A fuse state indicator for a fuse including a cylindrical fuse body and a primary fuse element therein, said fuse state indicator comprising:

an extension member;

a transparent lens;

a combustible substance adjacent the lens;

a secondary fuse link adjacent said combustible substance; and

a curved backing layer adjacent said secondary fuse link, said backing layer at least partially concealed by said combustible substance when viewed through said transparent lens before the fuse has opened, said backing layer maintaining said secondary fuse link in position with respect to said combustible substance.

2. A fuse state indicator in accordance with claim 1 further comprising a conductive clip extending from a first end of said extension member and configured to engage an end of said fuse body.

3. A fuse state indicator in accordance with claim 2, further comprising an end cap electrically connected to said clip.

4. A fuse state indicator in accordance with claim 1 further comprising a clip electrically connected to said secondary fuse link.

5. A fuse state indicator in accordance with claim 1 wherein said extension member is elongated in a longitudinal direction and curved in a lateral direction.

6. A fuse state indicator in accordance with claim 1 wherein said secondary fuse link comprises a high resistance portion and a low resistance portion.

7. A fuse state indicator in accordance with claim 1 wherein said secondary fuse link comprises a fuse wire wrapped with a resistance wire.
8. A fuse state indicator in accordance with claim 1 wherein said combustible substance and said flexible backing layer have contrasting colors.
9. A fuse state indicator in accordance with claim 1 wherein said backing layer is flexible.
10. A fuse state indicator in accordance with claim 1 wherein said flexible backing layer comprises electrical tape.
11. A fuse state indicator in accordance with claim 1 wherein said combustible substance is nitrocellulose cotton.
12. An electric fuse comprising:
 - a tubular fuse body having a first end, a second end, and an aperture for fuse state identification;
 - first and second end caps coupled to said body;
 - a primary fuse element electrically connected between said first and second end caps; and
 - a fuse indicator assembly comprising a secondary fuse link electrically connected between said first and second end caps, a combustible substance adjacent said secondary fuse link, and a flexible backing layer coupled to an extension member and maintaining said secondary fuse link in position with respect to said combustible substance.
13. A fuse in accordance with claim 12 further comprising a first clip extending from a first end of said body and a second clip extending from a second end of said body, said secondary fuse link extending between said first and second clips.

14. A fuse in accordance with claim 12, wherein said first and second end caps are electrically connected to said first and second clips.

15. A fuse in accordance with claim 12 further comprising a transparent lens located within said aperture, said combustible substance positioned adjacent said transparent lens, at least a portion of said combustible substance visible through said transparent lens before said primary fuse link is opened.

16. A fuse in accordance with claim 12 wherein said combustible substance and said flexible backing layer have contrasting colors.

17. A fuse in accordance with claim 12 wherein said combustible substance is nitrocellulose cotton.

18. A fuse in accordance with claim 12 wherein said flexible backing layer comprises electrical tape.

19. A fuse in accordance with claim 12 further comprising an extension member configured to position said secondary fuse link adjacent said combustible substance.

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²⁰~~20~~. A fuse state indicator in accordance with claim 12 wherein said secondary fuse link comprises a high resistance portion and a low resistance portion, said high resistance portion located proximate said combustible substance.

²¹~~21~~. A fuse state indicator in accordance with claim 12 wherein said secondary fuse link comprises a fuse wire wrapped with a resistance wire.

²²~~22~~. An electric fuse comprising:
a tubular fuse body having a first end and a second end and an aperture for fuse state identification;

first and second end caps coupled to said body;

a primary fuse element electrically connected between said first and second end caps;

a fuse indicator assembly comprising an extension member, a secondary fuse link electrically connected between said first and second end caps, a combustible substance adjacent said secondary fuse link, and a flexible backing layer coupled to said extension member and adjacent said secondary fuse link, said flexible backing layer maintaining said secondary fuse link in position proximate said combustible substance for visible fuse state indication through said aperture of said fuse body by the presence or absence of said combustible substance.

²³₂₄. An electric fuse in accordance with claim ²²₂₃ further comprising a conductive first clip and a conductive second clip extending from a first end and a second end of said extension member, each said clip configured to engage an end of said fuse body and electrically connect to a respective one of said first and second end caps.

²⁴₂₅. A fuse in accordance with claim ²²₂₃, wherein said secondary fuse link is electrically coupled to said first and second clips.

²⁵₂₆. A fuse in accordance with claim ²²₂₃ further comprising a transparent lens located within said aperture, said combustible substance adjacent said transparent lens, at least a portion of said combustible substance visible through said transparent lens before said primary fuse link is opened.

²⁶₂₇. A fuse in accordance with claim ²²₂₃ wherein said extension member is elongated in a longitudinal direction and curved in a lateral direction.

²⁷₂₈. A fuse in accordance with claim ²²₂₃ wherein said flexible backing layer comprises electrical tape.

²⁸₂₉. A fuse in accordance with claim ²²₂₃ wherein said secondary fuse link comprises a first portion having a first resistance and a second portion having a second resistance, said first resistance being greater than said second resistance.

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30. A fuse state indicator for a fuse including a primary fuse element in an insulative body, the insulative body having an aperture therethrough for fuse state identification, said fuse state indicator comprising:

an insulative extension member defining a cavity;

a combustible substance received within said cavity;

a secondary fuse link extending across said extension member and said cavity such that said secondary fuse link is positioned adjacent said combustible substance; and

a flexible backing layer coupled to said extension member and closing said cavity over said combustible substance, wherein said secondary fuse link is positioned between said backing layer and said combustible substance, said backing layer at least partially concealed by said combustible substance when viewed through the aperture in insulative fuse body before the primary fuse element has opened, said backing layer maintaining said secondary fuse link in position with respect to said combustible substance.